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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/589,252	06/07/2000	Yifan Gong	TI-25489.1	9666

7590 01/28/2005  
Robert L Troike  
P O Box 655474 MS 3999  
Dallas, TX 75265-5474

EXAMINER
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AZAD, ABUL K

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 01/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/589,252

**Applicant(s)**

GONG, YIFAN

**Examiner**

ABUL K. AZAD

**Art Unit**

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-27 is/are allowed.
- 6) ☒ Claim(s) 11-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This action is in response to the communication filed on October 19, 2004.
2. Claims 11-27 are pending in this action. Claims 1-10 have been canceled.
3. The Terminal Disclaimer filed on October 19, 2004 has been Approved by the examiner. The double patenting rejection is set forth in the previous Office Action is hereby withdrawn.
4. The applicant's arguments with respect to claims 11-13 have been fully considered but they are not deemed to be persuasive. For examiner's response to the applicant's arguments or comments, see the detailed discussion in the Response to the Arguments section.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Woodland et al. (Iterative unsupervised adaptation using maximum likelihood linear regression).

As per claim 11, Woodland teaches, "a method of source normalization for modeling of speech comprising the steps of:"

“providing an initial speech recognition model and performing a set of transformations on said initial speech recognition model or following new speech recognition models to reduce the recognition error rate by determining new speech recognition models and determining new transformation jointly with the new speech recognition models” (see section 1. Introduction and section 3. MLLR overview).

As per claim 12, Woodland teaches, “wherein said set of transformations includes an application of an estimation maximization algorithm” (Abstract).

As per claim 13, it is interpreted and thus rejected for the same reasons set forth in the rejection of claim 12.

#### ***Allowable Subject Matter***

7. Claims 14-27 are allowed over the prior art of record.

#### ***Response to Arguments***

8. The applicant argues “There are two important components in the procedure of both Woodland and applicants. They are speech models and transformations. The key issue is the words in our claim of “determining new speech models and determining new transformations jointly (emphasis underlined).” In Woodlands the speech models are determined and left unchanged, then the transformations are determined. During the

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determination of the transformations, the speech models are NOT changed anymore. Such procedure without changing the original speech models is suboptimal”.

9. The examiner disagrees with the applicant's assertion, because Woodland teaches, “determining new speech models and determining new transformations jointly” at section 3 (MLLR OVERVIEW), particularly reads on “a set of transformation matrices are estimated which are applied to the Gaussian mean parameters. . . the matrices are estimated so as to maximize the likelihood of the transformed models generating the adaptation data”. From the section 3, it is further clear that Woodland teaches by transforming initial speech model to maximize the likelihood of the transformed new models are generating. Also Woodland teaches during the determination of the transformation the initial speech models are changed.

As per claim 13, Woodland teaches all the claimed limitation as discuss above.

Therefore, applicant's arguments on claims 11-13 are not deemed to be persuasive.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Contact Information***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Abul K. Azad** whose telephone number is **(703) 305-3838**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richemond Dorvil**, can be reached at **(703) 305-9645**.

Any response to this action should be mailed to:

**Commissioner for Patents**

**P.O. Box 1450**

**Alexandria, VA 22313-1450**

Or faxed to:

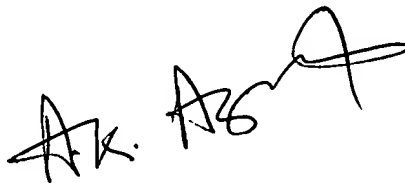
**(703) 872-9314**

(For informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center's Customer Service Office at telephone number (703) 306-0377.

A handwritten signature in black ink, appearing to read 'A.K. Azad' with a stylized flourish at the end.

Abul K. Azad

January 27, 2005